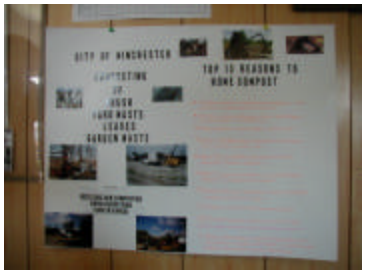
The City of Winchester Yard Debris Compost Facility

The City of Winchester compost operation has been in operation since 1991. The goal was to manage yard trimmings and debris in an environmentally friendly and responsible manner. The results are impressive and the city not only diverts this material from final disposal, they produce high-quality compost that is sold to citizens. The City of Winchester's yard waste program is a model that other Indiana communities should consider when starting or expanding their programs.

The city develops various methods of educating the public on how to participate in the program. Posters, school field trips, compost give-away, and environmental events are examples of their educational efforts. Through the city's educational efforts the residents of Winchester understand the value of the composting program and support and participate in this program regularly.



An educational poster that is used throughout the city.

The city purchased an enclosed 25-yard leaf collector. Collection begins in late September and concludes around Thanksgiving. The leaves are stockpiled at the north end of the facility. The crew continually collects leaves in the morning. There is a person on the hose, one that rakes, and the driver. The driver can easily see the crew in his mirrors as they travel down the streets. The person raking checks for undesirable debris, such as bricks, asphalt chunks, and other debris that need to be kept out of the vacuum and compost feedstock. They will then unload and break for lunch, and collect an additional load in the afternoon, collecting in all 50 yards per day.

The grant funded leaf collector is pulled behind a renovated furniture truck.

The city purchased an 85 horsepower drum type brush chipper. The chipper is used weekly on brush piles that citizens place on the curbside on garbage days. The grant funded brush chipper can process limbs up to 12-inch diameter. The city is divided into three zones for scheduled trash and yard waste collection days. Each zone is assigned a day for collection of materials (Monday, Wednesday, and Friday). During garbage collection routes, the crew makes note of limb and brush piles that have developed in the city. The crew returns later to process and collect that material. The material is then hauled to and stockpiled at the yard waste facility.

The chipper is pulled to brush and limb piles at the curb.

In addition to the curbside collection of yard trimmings and leaves, the city maintains a public drop-off area. Citizens are also allowed to drop materials off at the facility. The city then process the materials as time allow.

Citizen may dump collected debris, which is processed later.

The city keeps a stockpile leaves at the compost site. The advantage of the stockpiled leaves is that it has the capacity to absorb odor or odor causing elements of green waste such as grass. The city also stockpiles limbs and brush trimmings at the site. Larger wood is segregated for citizens that use it for firewood. The mixing of materials from the previous season's collections begins in August.

The loader will incorporate collected grass into the pile.

Grass is placed into the leaf pile. The leaves absorb any odors from the grass.

The collected materials are allowed to passively mature until mixing begins in August. This stockpile area is approximately 300 feet by 100 feet. The area is just south of the Street Department garage.

Yard trimmings and debris stockpiled on the east end of the site.

The mixing process begins by loading material into a hammer-mill. The city staff has established a successful recipe for the compost mixture. The amount of chips, grass, and leaves are monitored as it is added to the hammer-mill. Once this material has been mixed it will be turned by a loader. A windrow turner could be utilized for this, but the city uses a loader due to lack of space at the compost site.

Yard debris stockpile mixed on north area

The hammer-mill not only mixes; it reduces the size and also aerates the material. The city uses an 8-foot hammermill with two sets of knives. One set are on the machine, the other are kept in the shop as a backup and to have a fresh edge welded on.

Loader places yard trimmings into hammer-mill.

The crew size depends on the workload of the department. It can operate with a one to a three-person crew. With the hammer-mill set up in the appropriate area, one operator keep it filled using the loader. The loader can be pulled down the length of the windrow.

The hammer-mill has a screen that eliminates sticks and other undesirable material from the finished materials. As the material moves towards a final product, it is noticeably finer grade, and fewer pieces of large coarse chunks can be found.

The hammer-mill is pulled down the windrow as the material is processed.

Once the material is thoroughly mixed and mature, it is taken to an adjoining concrete pad. The final compost pile will continue to be turned according to temperature. The ideal temperature is 140 degrees Centigrade. When ideal conditions don't exist, the pile is turned.

Mixed materials are moved to compost pad.

The pile matures on the pad south of the stockpile area

The city will run the mature compost through the hammermill an additional time. This will cool the material and remove larger and undesirable objects from the material.

The finished compost is available beginning in early April

People will drive as much as an hour to buy the material from the city. The finish compost is sold by the bucket-load. The supply of finished compost is usually depleted by mid-May

Recently, the city has begun delivering wood chips to the local fair grounds to be used as animal bedding. After being used, this bedding/liter mixture is returned to the compost site. The city has a test plot to assess the quality of this composted mixture. The city typically segregates these test materials from the regular yard debris program until they are sure it will cause no problems.

The city has initiated a pilot project of manure compost.